

WHAT IS CLAIMED IS:

1. A sincerity index system for determining the sincerity of a person undergoing muscular testing, said person having specific first muscles associated with a body movement and second muscles corresponding to said first muscles during the performance of said body movement, said system comprising:

a muscular force detector for sensing and measuring the force exerted by said first muscles upon a predetermined body movement, said force detector having a first signal output proportional to the force exerted;

an electromyograph for sensing and measuring the bioelectric (EMG) activity of said second muscles, said electromyograph, simultaneously with said force detector, having a second signal output proportional to the EMG; and,

an interface device for processing said first and said second signal outputs, said interface device providing at least two factors; and,

an index-forming program for combining said factors in a predetermined manner to provide a sincerity index having a lower limit and an upper limit.

2. A sincerity index system as described in Claim 1 wherein said index-forming program further comprises:

a dynamometer force factor program deriving at least one first factor from said first signal, said first factor having a value between said lower limit and said upper limit;

an EMG force factor program deriving at least one second factor from said second signal having a value between said lower limit and said upper limit;

whereby the index formed by the combination thereof represents the sincerity of effort.

3. A sincerity index system as described in Claim 2 for determining the sincerity of a person undergoing muscular testing as described in Claim 1 wherein said correlative value is an index between 0 and an upper limit with values approaching 0 representing lack of sincerity and those values approaching said upper limit representing greater sincerity.

4. A system for determining the sincerity of a person undergoing muscular testing as described in Claim 2 wherein said index further comprises:

a muscular force factor being less than said upper limit with

a first fractional weighting factor therefor; and,

an SEMG factor being less than said upper limit with a second fractional weighting factor therefor, said first and said second weighting factors totalling said upper limit.

5. A system for determining the sincerity of a person undergoing muscular testing as described in Claim 1 wherein said comparator further comprises:

first program means for analyzing said first signal output to generate said muscular force factor for in-process calculation of the index; and,

second program means for analyzing said second signal output to generate said SEMG factor for in-process calculation of the index.